

Key

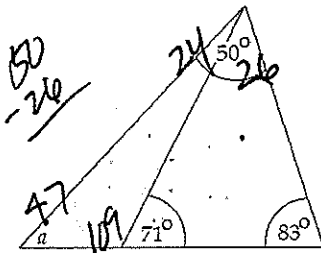
CW#21: Circumference of Circles
Geometry

Name: _____ TP: _____

CRS	MEA502: Compute the area and circumference of circles after identifying necessary information.
Objective	3.5: Find circumference of a circle.

Review!

1) What is the value of a in the picture below?



A. 47° B. 49° C. 52° D. 59°

2)

The area of a circle is 121π square units. What is the diameter, in units, of the circle?

- F. π
G. 11
H. 22
J. 11π
K. 121

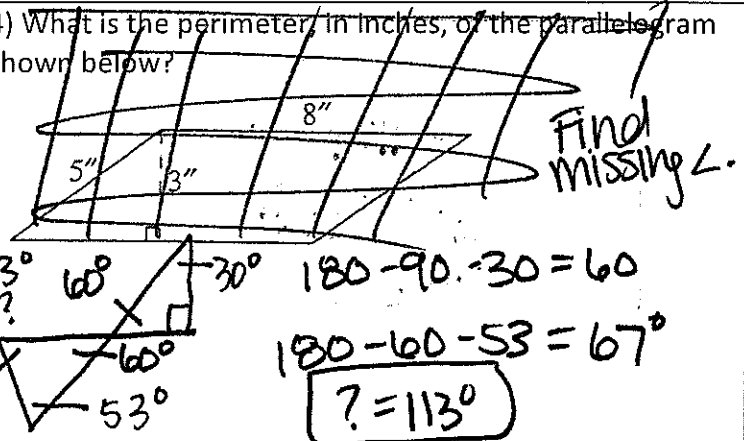
$$\pi r^2 = 121\pi$$

$$\sqrt{r^2} = \sqrt{121}$$

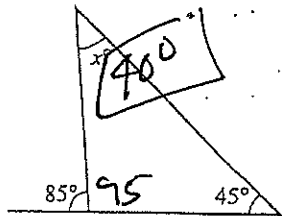
$$r = 11$$

$$11(2) = 22$$

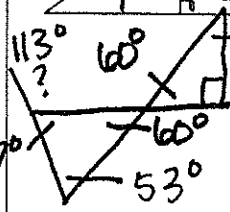
4) What is the perimeter, in inches, of the parallelogram shown below?



3) A triangle has one interior angle that has a measure of 45 degrees, another interior angle that has a measure of x degrees, and an exterior angle that has a measure of 85 degrees, as shown below. What is the value of x ?



$$180 - 67 = 113$$



$$180 - 90 - 30 = 60$$

$$180 - 60 - 53 = 67$$

$$? = 113$$

NEED TO KNOW!	Picture:	Formula:
<p>Circle with radius "r" and diameter "d"</p> <p>$\pi = 3.14$</p>		<p>Circumference:</p> <p>$2\pi r = C$</p> <p>or</p> <p>$d\pi = C$</p>

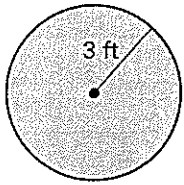
PUSH IT TO THE LIMIT.

Finding circumference:

45

Round all answers to nearest hundredth

Example 1: Find the circumference of the circle.



$$2\pi(3)$$

$$6\pi \text{ or }$$

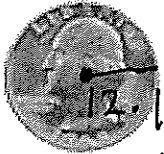
$$18.84 \text{ ft}$$

Example 2: An orange sliced in half has a diameter of 5 inches. Find the circumference.



$$5\pi \text{ in or } 15.7 \text{ in}$$

1) A quarter has a radius of 12.1 mm. Find the circumference of the quarter.

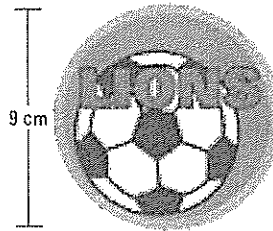


$$2\pi(12.1)$$

$$24.2\pi \text{ or }$$

$$76 \text{ mm}$$

2) Mr. Begres is ordering circular cloth patches for the soccer team's uniform. If the diameter is 9 cm, find the approximate circumference of the patch.



$$C = \pi d$$

$$= \pi(9) = 9\pi \text{ cm}$$

$$28.26 \text{ cm}$$

Example 3: A circular dish of pasta has a circumference of 84.8 cm. What is the diameter of the wheel? What is the radius?



$$C = 2\pi r$$

$$84.8 = d\pi$$

$$27 \text{ cm} = d$$

3) A bicycle tire has a circumference of 56 inches. What is the diameter of the wheel? What is the radius?



$$C = 56$$

$$C = \pi d$$

$$56 = \pi d$$

$$17.83 \text{ in} = d$$

$$8.92 \text{ in} = r$$

4) The distance around the outside of a circle may also be called which of the following?

A. diameter

B. area

C. radius

D. circumference

5) Which expression below gives the perimeter of a circle?

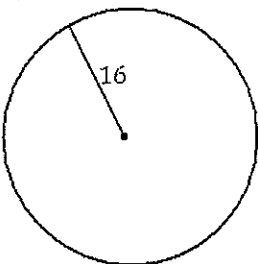
A. πr

B. $2\pi d$

C. both are correct

D. neither are correct

6) The circumference of the circle is...



$$2\pi r$$

$$2\pi(16)$$

$$32\pi$$

A. 16π

B. 32π

C. 256π

D. 1024π

7) If the official basketball of both men's N.B.A. and N.C.A.A. leagues has a circumference of 30 cm, what is the diameter of the basketball? What is the radius?



$$C = 30 \text{ cm}$$

$$30 = \pi d$$

$$9.55 = d$$

$$\text{cm}$$

$$4.78 \text{ cm} = r$$

Challenge:

$$a) C = 2\pi r$$

$$C = \pi d$$

$$C = 980.2$$

$$\frac{980.2}{\pi} = 198 \text{ bricks}$$

b) 1 bundle

PUSH IT TO THE LIMIT.